

PATENT  
Serial No. 10/014,859  
Amendment in Reply to Office Action of August 10, 2005

IN THE SPECIFICATION

Please amend the specification as follows:

Replace the paragraph on page 3, between lines 6-7 of the specification with the following:

Fig. 2 shows a layer model for explaining various functions of a terminal or of a radio network controller, and

Replace the paragraph on page 3, between lines 8-9 of the specification with the following:

Figs. 3 to 5 show various lists to explain the sorting schemes according to the ~~invention~~, invention, and

Add the following paragraph on page 3, between lines 9-10 as follows:

Fig. 6 shows a flow chart explaining various functions of a terminal or of a radio network controller according to the invention.

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Replace the paragraph spanning pages 4-5, between page 4, line 28, and page 5, line 9 of the specification with the following:

The exchange of control and useful data via the radio interface between the radio network controller 1 and the terminals 2 to 9 can be explained with the layer model or protocol architecture shown by way of example in Fig. 2 (compare for example 3rd Generation Partnership Project (3GPP); Technical Specification Group (TSG) RAN; Working Group 2 (WG2); Radio Interface Protocol Architecture; TS 25.301 V3.6.0). The layer model comprises three protocol layers: the physical layer PHY, the data link layer having the sub-layers MAC and RLC (in Fig. 2 various objects of the sub-layer RLC are shown) and the layer RRC. The sub-layer MAC is equipped for Medium Access Control, the sub-layer RLC for Radio Link Control and the layer RRC for Radio Resource Control. The layer RRC is responsible for the signaling between the terminals 2 to 9 and the radio network controller 1. The sub-layer RLC is used for controlling a radio link between a terminal 2 to 9 and the radio network controller 1. The layer RRC controls the layers MAC and PHY via control links 10 and 11. By doing this, the layer RRC can control the configuration of the layers MAC and PHY. The

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physical layer PHY offers transport links 12 to the layer MAC. The layer MAC renders logic connections 13 available to the layer RLC. The layer RLC can be reached by applications via access points 14.

Replace the paragraph on page 5, between lines 10-17 of the specification with the following:

Packet data units are formed in the layer RLC and packed into transport blocks in the MAC layer, which transport blocks are transmitted by the physical layer via physical channels from the radio network controller to a terminal and vice versa. In addition to such a multiplex or demultiplex function, respectively, the MAC layer has the function of selecting suitable transport format combinations (TFC) as shown in box 110 of Fig. 6. A transport format combination represents a combination of transport formats for each transport channel. The transport format combination describes inter alia how the transport channels are multiplexed in the physical layer into a physical channel (time multiplex).

Replace the paragraph on page 7, between lines 8-19 of the specification with the following:

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When this transport channel and, consequently, all logic channels which are mapped onto the transport channel, are inactive in one radio frame, the transport format for this transport channel can be taken from the transport format combination selected for the previous radio frame. In the other case, when the current logic channel (LC\_X) is mapped onto an active transport channel (TC\_Y), the MAC layer determines the best transport format that the transport channel TC\_Y can offer to the RLC layer according to the transport format sets for the transmit packet data units in the buffer of the logic channel (LC\_X) (while considering all the packet data units that were already assigned to the transport channel TC\_Y during the query of logic channels having a higher priority, which are also mapped onto the assigned transport channel TC\_Y ). The best transport format is the transport format that allows the highest number of real useful data bits on the assigned transport channel TC\_Y for the transmission. A reduced number of transport format combinations is formed by selecting transport format combinations that allow the highest number of or more than the highest number of available packet data units to be transmitted, as shown in box 120 of Fig. 6.

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Replace the paragraph on page 12, between lines 1-8 of the specification with the following:

The As shown in box 130 of Fig. 6, the transport format combination is selected in S0, which combination allows of the transmission of the lowest number of useful data bits, while the number of transport blocks are taken into account that have already been assigned to the inactive transport channels in the present radio frames. This may mean that the currently active logic channels have to generate filler packet data units (i.e. these packet data units do not evolve from real useful data) if the transport format combinations found only allow the transmission of more transport blocks than there are packet data units in the buffer. This terminates the procedure.  
Otherwise: back to step 1.